
Griffinia alba (Amaryllidaceae), a New Species from Northeastern Brazil

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ABSTRACT. *Griffinia alba* is described as new from Tapera, Pernambuco, in northeastern Brazil. It is most similar to the type species for the genus *Griffinia*, *G. hyacinthina*, which is known from the states of Rio de Janeiro and São Paulo in southeastern Brazil. It differs from this species by its cuneate leaf bases, and more numerous, entirely white flowers with longer pedicels and narrower tepals. *Griffinia alba* is the first white-flowered species to be described in subgenus *Griffinia*.

RESUMO. *Griffinia alba* é descrita como uma nova espécie do município de Tapera, Pernambuco, Brasil. *Griffinia alba* é mais semelhante na forma à *G. hyacinthina*, que é encontrada nos estados do Rio de Janeiro e São Paulo. Difere desta pela base cuneada da folha, flores inteiramente brancas mais numerosas com pedicelos mais longos, e tépalas mais estreitas. *Griffinia alba* é a primeira *Griffinia* com flores cor de branco descrita no sobgênero *Griffinia*.

The most recent taxonomic treatment of the genus *Griffinia* Ker Gawler (Amaryllidaceae) recognizes six species (Traub & Moldenke, 1949). However, since that time the genus *Hyline* Herbert, composed of two species, has been reduced to a subgenus of *Griffinia* (Ravenna, 1969), and an additional four species belonging to subgenus *Griffinia* have been described (Morel, 1960; Ravenna, 1969, 1974, 1978). The genus is unique in the Amaryllidaceae for the presence of a true hypanthium, formed by the continuation of the perigonal tube over the ovary in some of the species (Ravenna, 1969; Preuss, 1999). Phylogenetic analyses based on nuclear rDNA ITS sequences resolve *Griffinia* as sister group to the monotypic *Worsleya raineri* (Hooker f.) Traub & Moldenke, also endemic to Brazil (Meerow et al., 2000; Preuss, 1999).

Griffinia is marked by its petiolate and sometimes white or silver-spotted leaves, its turgid seed lacking phytomelan, and blue range pigmentation in the flowers (subg. *Griffinia*), a character shared

with *Worsleya*. All species that we have examined have $2n = 20$ chromosomes, with frequent triploidy ($2n = 30$) characteristic of cultivated relicts of extirpated populations (Preuss, 1999). *Griffinia* is native to the various forest ecotypes of the Mata Atlântica and the nearby northeastern regions of the Caatinga Province (Oliveira-Filho & Ratter, 1995). *Griffinia* subg. *Griffinia* is characterized by small to large, diurnal, strongly zygomorphic, lilac, or lilac and white-colored flowers with the upper stamen assurgent and separated from the other declinate five (or sometimes obsolete). This subgenus occupies moist tropical forest habitats of the Mata Atlântica, or Brazilian Atlantic Forest, ranging from the state of Pernambuco in the north to the state of São Paulo in the south. *Griffinia* subg. *Hyline* has fragrant, large, nocturnal, white-colored flowers, and occupies a more xeric habitat such as the deciduous cerrado forests found in Goiás and Tocantins and the *caatinga* woodlands of the northeast region. Belonging to subgenus *Griffinia*, *G. alba* is described as new from Tapera, Pernambuco, and is the only species of *Griffinia* known to occur in that state.

Griffinia alba K. Preuss & Meerow, sp. nov.

TYPE: Brazil. Pernambuco: Tapera, wooded habitat, 16 Nov. 1936, B. Pickel 2907 (holotype, US). Figures 1, 2.

Haec species *Griffinae hyacinthinae* Ker Gawler affinis, sed ab ea floribus albis, amplioribus, pedicellis longioribus, atque foliis basi anguste cuneatis differt. Habitat in silvis Taperae, Pernambuco, Brazil.

Bulbous terrestrial geophyte to ca. 50 cm tall (Fig. 1A). Bulb tunicate with contractile roots; tunics thin, drying brown, and becoming papery. Leaves distichous (Fig. 1A), petiolate; petiole to 30 cm long; lamina (Fig. 1B) ovate to elliptic, to ca. 40 cm long and 12–15 cm broad, margin entire, apex acuminate, base cuneate and gradually tapering into the petiole, with prominent transverse reticulate venation (Fig. 1C), glabrous adaxially, glau-

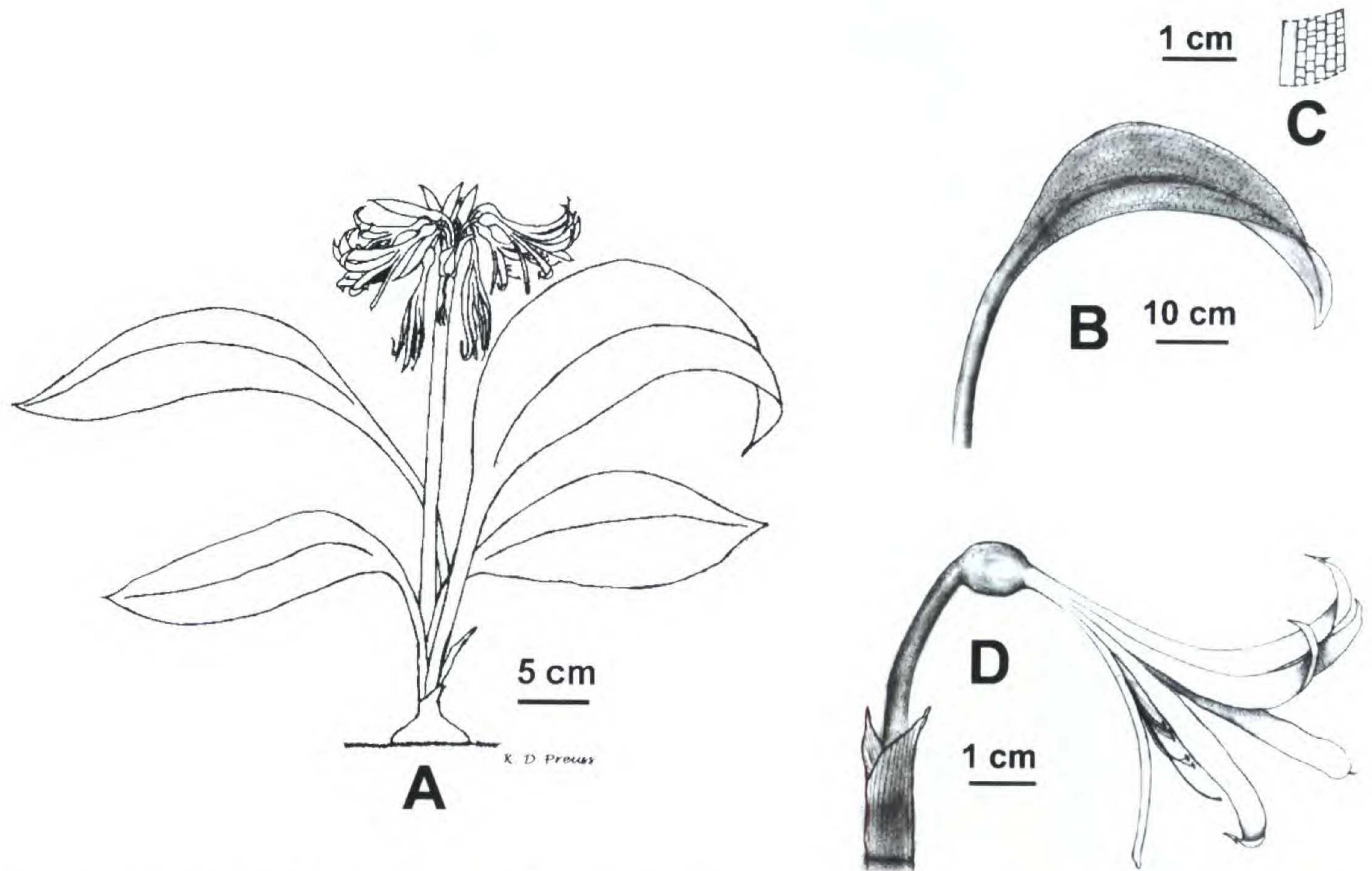


Figure 1. *Griffinia alba* Preuss & Meerow (Pickel 2907). —A. Reconstructed habit. —B. Single leaf. —C. Detail of adaxial surface showing commissural venation. —D. Flower.

cous abaxially. Inflorescence scapose (Fig. 1A); scape 35–38 cm tall, two-edged, solid, green, glabrous, terminating in a 16- to 17-flowered pseudo-umbel (reduced helicoid cymes) enclosed by two partially fused ocreaceous, spathe bracts 2.3–2.5 cm long; pedicels 2.1–2.9 cm long, green. Perianth (Fig. 1D) zygomorphic; tepals 6 in two whorls, white, glabrous, fused into a perigonal tube ca. 1.3–1.5 cm long that is continuous with the ovary (thus forming a true hypanthium), arranged in a 5+1 manner with the upper 5 tepal segments reflexed and the lowermost descending, 4–5 cm long and 1–1.5 cm broad, narrowly obovate with acute apices, the outer whorl apiculate. Stamens 6 (5 declinate and 1 assurgent); filaments varying in length from 1.4 to 3.2 cm; anthers ca. 1 mm long, versatile, introrse, dehiscing longitudinally; pollen whitish. Style filiform, declinate, ca. 3.6–3.8 cm long; stigma truncate-punctate. Ovary semi-inferior, trilocular, ovoid to subglobose, ca. 5 mm diam.; ovules 2 to 6 per locule, axile but basally displaced, biseriate. Fruit and seed unknown.

During an investigation of the systematics of the genus *Griffinia* (Preuss, 1999), this new species was recognized from the type specimen (Pickel 2907, Fig. 2), which had been determined as *Griffinia intermedia* Lindley. However, *G. intermedia* is a con-

siderably smaller, blue-flowered species; its exact provenance is unknown (it was shipped to England from the state of Rio de Janeiro). Traub and Moldenke (1949) considered it “intermediate” between *G. hyacinthina* Ker Gawler and *G. parviflora* Ker Gawler. *Griffinia alba* closely resembles *G. hyacinthina*, but differs from that species by its cuneate leaf base, which gradually tapers into the petiole, greater number of flowers (up to 17 compared to 8 to 10), longer pedicels, white vs. lilac-colored flowers, and more linear tepal segments. *Griffinia alba* is the first entirely white-flowered species described in subgenus *Griffinia*.

Griffinia alba is endemic to the gallery forests of northeastern Brazil and is known from a single locality in Tapera, Pernambuco. The Mata Atlântica formerly extended into the state of Pernambuco via dendritic passages, or gallery forests (Bucher, 1982), into the Caatinga Province (Oliveira-Filho & Ratter, 1995). Rizzini (1979) suggested that the galleries, in conjunction with the other hinterland forests, represent extensions of the Atlantic forest into the *cerrado* domain.

Since this new species is represented by just a single collection, we presume that it is rare or extirpated in its native habitat. Unfortunately, deforestation currently threatens the native habitats of



Figure 2. Holotype of *Griffinia alba* (Pickel 2907, US).

all *Griffinia* (Dean, 1995), and species of the genus are among the most endangered of South American geophytes (Walter & Gillet, 1998).

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